**Lecture Learning Outcomes and Objectives**

**Week 4: The FUNGI**

*Given 2 hours of discussion and assigned reading on the subject, upon an examination and within 70% accuracy, the student should be able to:*

**Evolution and Characteristics of Fungi**

1. Compare and contrast fungal and animal heterotrophism.
2. List the five major groups within kingdom Fungi, and describe their divergence from a common ancestor.
3. Describe the general structure and characteristics of a fungus.
4. Explain how both sexual and asexual reproduction occurs in fungi.
5. Define dikaryotic/heterokaryotic and explain how the dikaryotic state fits into the fungal  life cycle.
6. Define the words hyphae, septate, nonseptate/coenocytic, mycelium, sporangium, spore

**Diversity of Fungi**

1. List the five major groups of fungi
2. Relate the defining characteristics of each of the five major groups of fungi.
3. Summarize the life cycle of a black bread mold.
4. Provide examples of the ecological and economic significance of fungi.
5. Provide examples of human health problems caused by fungi.
6. Define the terms zygospore, ascus, basidium, budding, yeast, conidiospore, fruiting body

**Symbiotic Relationships of Fungi**

1. 12. Name and explain the role of the two components of a lichen.
2. 13. Describe the mutualistic relationship between a mycorrhizae and plants.
3. Give examples of pathogenic/parasitic fungi
4. Be able to use and define the following terminology: mycology, thallus, karyogamy, mycelium, plasmogamy, saprobe, septa, sporangium, basidium, mycorrhizae, mold, lichen, mycosis

***Note: Out of coherence with the textbook and manual, we are covering the fungi divisions mentioned above, however, the classification of fungi has changed recently. Zygomycetes are no longer recognized as a phylum and 2 additional phyla of flagellated spores producing fungi have been added.***